abcam

ab76420

Anti-RPA32/RPA2 antibody [EPR2877Y]

Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420) is a rabbit monoclonal antibody detecting RPA32/RPA2 in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 20 publications
- Trusted since 2009

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR2877Y
Purification technique	Affinity purification Protein A
Concentration	0.11 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/20
Notes	**For unpurified format use at 1/40.**

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	**For unpurified format use at 1/5000 - 1/10000.**

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Species	Rat
Dilution info	1/50
Notes	-

Species	Human
Dilution info	1/50
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information RPA2

Function	As part of the heterotrimeric replication protein A complex (RPA/RP-A), binds and stabilizes single-stranded DNA intermediates that form during DNA replication or upon DNA stress. It prevents their reannealing and in parallel, recruits and activates different proteins and complexes involved in DNA metabolism. Thereby, it

plays an essential role both in DNA replication and the cellular response to DNA damage. In the cellular response to DNA damage, the RPA complex controls DNA repair and DNA damage checkpoint activation. Through recruitment of ATRIP activates the ATR kinase a master regulator of the DNA damage response. It is required for the recruitment of the DNA double-strand break repair factors RAD51 and RAD52 to chromatin in response to DNA damage. Also recruits to sites of DNA damage proteins like XPA and XPG that are involved in nucleotide excision repair and is required for this mechanism of DNA repair. Also plays a role in base excision repair (BER) probably through interaction with UNG. Also recruits SMARCAL1/HARP, which is involved in replication fork restart, to sites of DNA damage. May also play a role in telomere maintenance. RPA stimulates 5'-3' helicase activity of BRIP1/FANCJ (PubMed:17596542).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of RPA32/RPA2?
Anti-RPA32/RPA2 [EPR2877Y] (ab76420) specifically detects a band for RPA32/RPA2 (UniProt: P15927) at a molecular weight of 29kDa.

Trusted by the scientific community
Anti-RPA32/RPA2 [EPR2877Y] (ab76420) was first used in a scientific publication in 2009 and has been cited over 20 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [EPR2877Y] also available for your convenience: ab76420, Alexa Fluor® 647 - ab225034, Alexa Fluor® 488 - ab225035, Carrier free - ab236044, PE - ab305805, APC - ab305806, HRP - ab305807, Alkaline Phosphatase - ab308696, Alexa Fluor® 594 - ab310406, Alexa Fluor® 555 - ab311933, Alexa

Fluor® 568 - ab312404, Alexa Fluor® 750 - ab321727

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

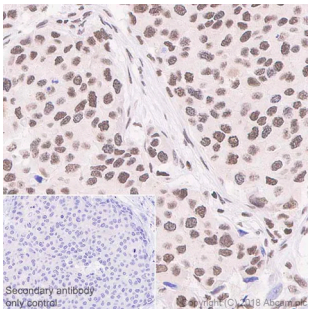
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

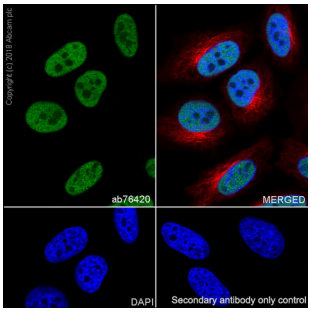
15 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

RPA32/RPA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPA32/RPA2 antibody

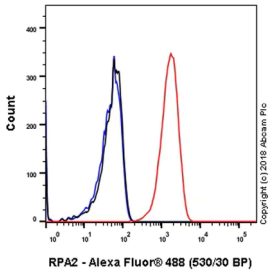
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human breast cancer tissue sections labeling RPA32/RPA2 with purified ab76420 at 1/100 dilution (1 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunocytochemistry/ Immunofluorescence - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

RPA32/RPA2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RPA32/RPA2 antibody

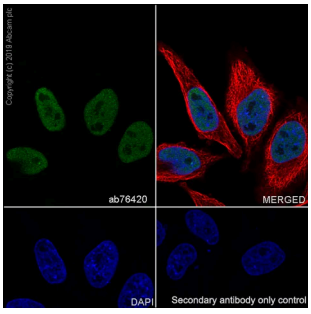
Immunocytochemistry/ Immunofluorescence analysis of HeLa (human cervix adenocarcinoma epithelial cell) cells labeling RPA32/RPA2 with purified ab76420 at 1:50 (2.28 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Flow Cytometry (Intracellular) - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

RPA32/RPA2 Flow Cytometry (Intracellular) staining using rabbit Anti-RPA32/RPA2 antibody

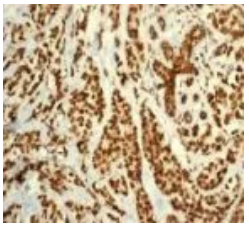
Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma epithelial cell) cells labeling RPA32/RPA2 with purified ab76420 at 1/200 dilution (0.58 µg/ml) - Red. Cells were fixed with 4% paraformaldehyde . A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (ab172730) - Black. Unlabeled control - Blue. Untreated cells - Green



Immunocytochemistry/ Immunofluorescence - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

RPA32/RPA2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RPA32/RPA2 antibody

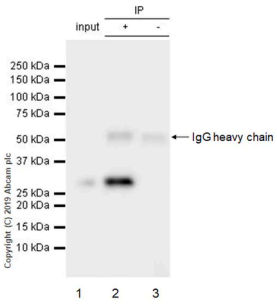
Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling RPA32/RPA2 with purified ab76420 at 1/50 dilution (2.0 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1/200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

RPA32/RPA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPA32/RPA2 antibody

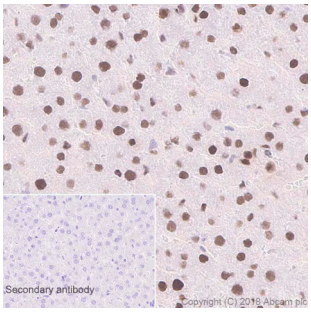
Immunohistochemical analysis of paraffin-embedded human breast carcinoma using ab76420 (unpurified) at 1/250 dilution.



Immunoprecipitation - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

ab76420 (purified) at 1/20 dilution (0.5ug) immunoprecipitating RPA32/RPA2 in HeLa whole cell lysate. HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10ug
Lane 2 (+): ab76420 & HeLa whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab76420 in HeLa whole cell lysate
For western blotting, VeriBlot for IP secondary antibody (HRP) (ab131366) was at 1/1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

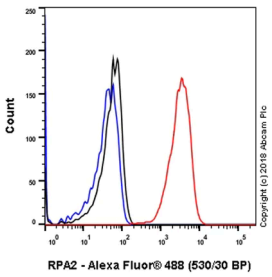
Predicted band size: 29 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

RPA32/RPA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPA32/RPA2 antibody

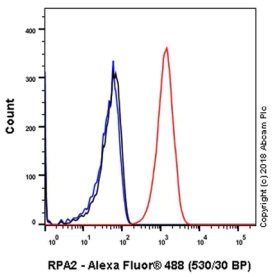
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Rat liver tissue sections labeling RPA32/RPA2 with purified ab76420 at 1/100 dilution (1 µg/ml). Heat mediated antigen retrieval was performed ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Flow Cytometry (Intracellular) - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

RPA32/RPA2 Flow Cytometry (Intracellular) staining using rabbit Anti-RPA32/RPA2 antibody

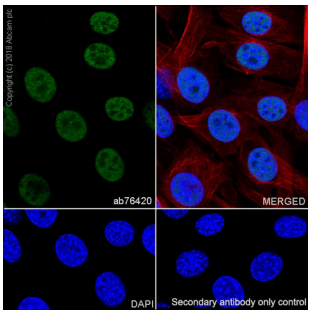
Intracellular Flow Cytometry analysis of C6 (rat glial tumor glial cell) cells labeling RPA32/RPA2 with purified ab76420 at 1/200 dilution (0.58 µg/ml) - Red. Cells were fixed with 4% paraformaldehyde . A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (ab172730) - Black. Unlabeled control - Blue. Untreated cells - Green



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RPA32/RPA2 Flow Cytometry (Intracellular) staining using rabbit Anti-RPA32/RPA2 antibody

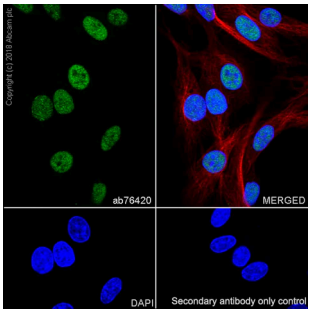
Intracellular Flow Cytometry analysis of NIH/3T3 (mouse embryonic fibroblast) cells labeling RPA32/RPA2 with purified ab76420 at 1/200 dilution (0.58 µg/ml) - Red. Cells were fixed with 4% paraformaldehyde . A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (ab172730) - Black. Unlabeled control - Blue. Untreated cells - Green



Immunocytochemistry/ Immunofluorescence - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

RPA32/RPA2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RPA32/RPA2 antibody

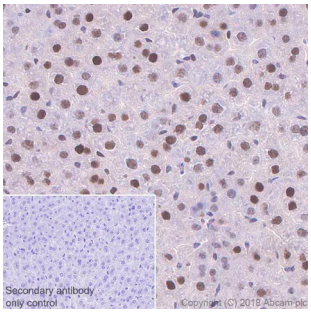
Immunocytochemistry/ Immunofluorescence analysis of C6 (rat glial tumor glial cell) cells labeling RPA32/RPA2 with purified ab76420 at 1:50 (2.28 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunocytochemistry/ Immunofluorescence - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

RPA32/RPA2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RPA32/RPA2 antibody

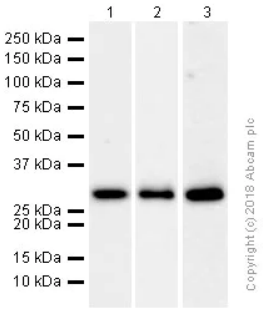
Immunocytochemistry/ Immunofluorescence analysis of NIH/3T3 (mouse embryonic fibroblast) cells labeling RPA32/RPA2 with purified ab76420 at 1:50 (2.28 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

RPA32/RPA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPA32/RPA2 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Mouse liver tissue sections labeling RPA32/RPA2 with purified ab76420 at 1/100 dilution (1 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Western blot - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

All lanes:
Western blot - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420) at 1/1000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 15 µg

Lane 2:
C6 (Rat glial tumor glial cell) whole cell lysates at 15 µg

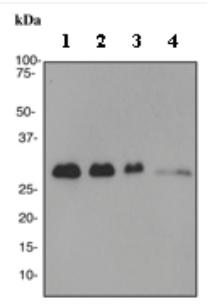
Lane 3:
NIH/3T3 (Mouse embryonic fibroblast) whole cell lysates at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 29 kDa

Observed band size: 29 kDa



Western blot - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

RPA32/RPA2 Western blot staining using rabbit Anti-RPA32/RPA2 antibody

All lanes:
Western blot - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420) at 1/10000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
HUVEC lysate at 10 µg

Lane 3:
NIH 3T3 cell lysate at 10 µg

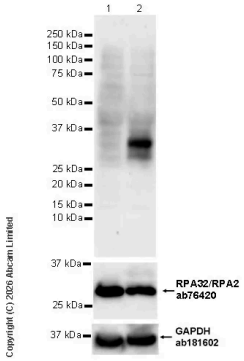
Lane 4:
C6 cell lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/1000 dilution

Predicted band size: 29 kDa

Observed band size: 29 kDa



Western blot - Anti-RPA32/RPA2 antibody [EPR2877Y] (ab76420)

RPA32/RPA2 Western blot staining of NIH/3T3 treated with 1 µM camptothecin for 3 h fresh whole cell lysate using rabbit Anti-RPA32/RPA2 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

The molecular weight of RPA32/RPA2 is upshifted in response to camptothecin treatment (PMID: 17928296).

To minimize protein degradation, cells were lysed immediately after harvest and then applied to a gel and transfer membrane for Western blotting as soon as possible.

This blot was developed using a high-sensitivity ECL substrate, allowing for the detection of proteins in the mid-femtogram range.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36KDa).

All lanes:
Western blot - Anti-RPA32/RPA2 (phospho S33) antibody [EPR29612-551] (ab325750) at 1/1000 dilution

Lane 1:
Untreated NIH/3T3 (mouse embryonic fibroblast) fresh whole cell lysate at 50 µg

Lane 2:
NIH/3T3 treated with 1 µM camptothecin for 3 h fresh whole cell lysate at 50 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Developed using the ECL technique.

Observed band size: 32 kDa, 36 kDa, 30 kDa

Exposure time: 70s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.